



KANSAS DEPARTMENT OF HEALTH & ENVIRONMENT

PROCEDURE FOR CONVERTING A HYDROCARBON STORAGE WELL TO MONITORING STATUS

Procedure #: UICLPG-4

(6/03)

Narrative:

The operator shall submit a plan for the conversion of a hydrocarbon storage well to monitoring status to the Kansas Department of Health and Environment (KDHE) for review and approval. The operator shall not commence conversion procedures until KDHE has approved the plan.

The plan shall include the following:

- % Cavern name and location
- % Current capacity
- % Cavern description
- % A diagram of any necessary modifications to the wellhead
- % Guidelines for conversion of the well to monitoring status (following procedure)

Procedure:

1. Depressurize the cavern by removing any product. Provide a procedure for removing product from the cavern, including the feasibility of removing any product trapped behind the casing.
2. Completely fill the well product casing and cavern with saturated brine or a blanket material that has received approval from KDHE. A product casing surface pressure of 50 psig must be maintained while the well is in monitoring status.
3. Check and record the well product casing pressure weekly using data from a continuous record made with an electronic device, electro- mechanical device, or manual gauge. Notify KDHE if a loss of monitoring pressure is noted. Provide notification as specified in K.A.R. 28-45-12. Make copies of gauge readings available to KDHE upon request. Alternative pressure monitoring methods may be conducted after review and approval by KDHE.
4. Remove the product and brine piping between the wellhead-brine and wellhead-product header valves.
5. Install blind flanges on all wellhead valves. Install blind flanges or weld caps on brine and product piping.
6. Remove electrical and instrumentation equipment not necessary for monitoring the well. Remove all unnecessary electrical and instrumentation equipment back to the nearest junction box.
7. Install a new and calibrated 0-100 psig gauge on the product casing. Verify pressure gauge accuracy semiannually with dead weight pressure measurements.

8. Report all activities, such as brine removal to relieve pressure or brine/fresh water injection. Reports shall include date, pressures, and volume. All anomalous readings and conditions shall be explained.
9. Conduct a mechanical integrity test, a gamma log, and a density log prior to placing the well in monitoring status as specified in K.A.R. 28-45-4a.
10. During the time that the well is in monitoring status, conduct a gamma log and a density log through the production casing as specified in K.A.R. 28-45-15(e). Additionally, the elevation survey will continue to be preformed as specified in K.A.R. 28-45-15(h).
11. Prior to placing cavern in service, conduct inspections and tests, including mechanical integrity testing, as specified in K.A.R. 28-45-16.
12. Submit a plan for modifications to monitoring status to KDHE for review and approval prior to the commencement of modifications.
13. Submit an annual report to KDHE summarizing activities including required testing and monitoring reports. KDHE will review the monitoring status of the cavern and determine if cavern can remain in monitoring status or should be returned to service or plugged.